

Notice of Allowability

Application No.

09/724,231

Examiner

Edith M. Chang

Applicant(s)

BALACHANDRAN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to April 7 2005.
2. ☒ The allowed claim(s) is/are 1,5-7,11,13,17-19,27 and 28.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 20050815.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Charles L. Warren on August 18, 2005.

2. The application has been amended as follows:

In the claims:

Claim 1, line 1: "steps" has been changed to "the steps"; line 10: "mean bit" has been changed to "said mean bit"; lines 11 & 14: "mean symbol or bit" has been changed to "mean symbol error probability or the mean bit"; line 17: "symbol or bit" has been changed to "mean symbol error probability or the mean bit".

Claim 5, line 3: "a demodulator" has been changed to "a demodulator of the receiver of the second transceiver".

Claim 11, line 2: "symbol or bit" has been changed to "symbol error probability or the mean bit".

Claim 13, line 4: "to receiver" has been changed to "to receive"; line 10: "mean bit" has been changed to "said mean bit"; lines 11-12: "symbol or bit error probabilities" has been changed to "symbol error probability or the bit error probability"; line 14: "the

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first” has been changed to “a first”; lines 15 & 17: “mean symbol or bit” has been changed to “mean symbol error probability or the mean bit”.

Claim 27, lines 2-3 & 3-4 (both instances): “mean symbol error probability or mean bit” has been changed to “the mean symbol error probability or the mean bit”.

Claim 28, line 2: “only soft” has been changed to “only the soft”; line 4: “metric” has been changed to “metrics”, “mean symbol” and “mean bit” have been changed to “the mean symbol” and “the mean bit” respectively.

In the drawings:

The following changes to the drawings have been approved by the examiner and agreed upon by applicant: Charles L. Warren Attorney for Applicants. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

Insert the descriptive labels in Figure 4 shown in red ink in the attached sheet of drawings.

3. The following is an examiner’s statement of reasons for allowance:

The prior art of record fails to teach or suggest, alone or in a combination, among other things, at least a system and its method as a whole, the combination of elements and features, which includes two transceivers, a processor in the receiver of the second transceiver determining mean symbol error probability or mean bit error probability from the soft decision metric determined by a decision device in the receiver of the second transceiver, the transmitter of the second transceiver transmitting a signal that carries

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the mean symbol error probability or the mean bit error probability to the first transceiver; and the first transceiver implements a first communication protocol upon the mean symbol error probability or the mean bit error probability exceeding a first threshold of one or more predetermined thresholds and implements a second communication protocol upon the mean symbol error probability or the mean bit error probability exceeding a second threshold of the one or more predetermined thresholds .

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

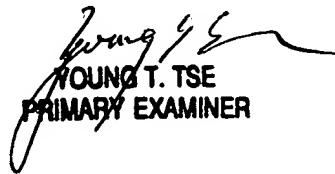
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edith M. Chang whose telephone number is 571-272-3041. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay K. Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edith Chang
August 18, 2005


YOUNG T. TSE
PRIMARY EXAMINER

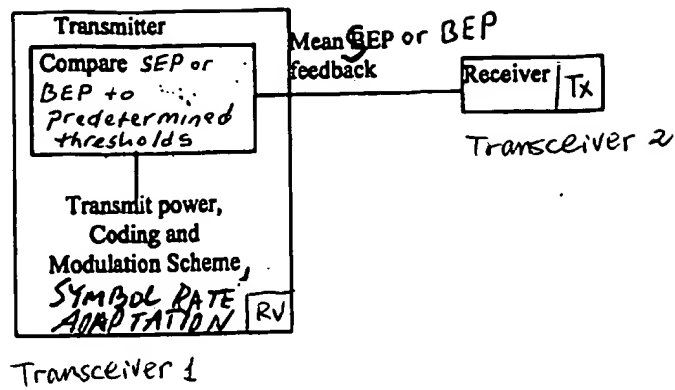


Figure 4: Use of Mean BEP or SEP for Rate Adaptation and Power Control

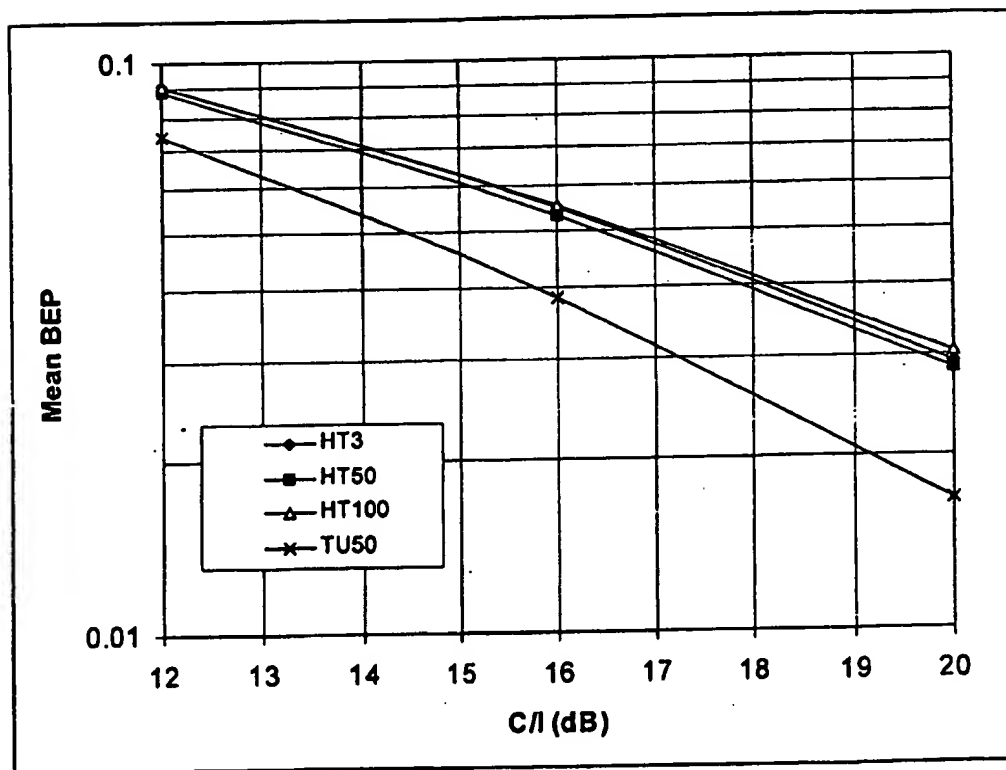


Figure 5: Mean Bit Error Probability estimate for different environments and mobile speeds; HT3 represents the channel model for a mobile speed of 3 km/h in a Hilly Terrain environment.